

Remarks

By this amendment, Claims 1-33, 76-88, and 90-107 have been amended to more clearly claim the invention. Claim 89 was canceled. Claims 34-75 were canceled in response to a restriction requirement imposed in a previous Action. Hence, Claims 1-33, 76-88, and 90-107 are currently pending in the application. The amendments to the claims as indicated herein do not add any new matter to this application.

Claims 1-3, 6, 9, 12-16, 21, 24, 25, 31-33, 76-78, 81, 84, 87-90, 95, 99 and 105-107 were rejected under 35 U.S.C. § 103(a), as being unpatentable over U.S. Pat. No. 6,856,993 to Verma et al. ("Verma") in view of U.S. Patent No. 6,636,878 to Rudoff ("Rudoff"). Claims 4, 5, 7, 8, 10, 11, 17-20, 22, 23, 26-30, 79, 80, 82, 83, 85, 86, 91-94, 96-98, and 100-104 were rejected under 35 U.S.C. §103(a) as being unpatentable over Verma in view of U.S. Pat. No. 6,101, 508 to Wolff ("Wolff").

REJECTION OF CLAIMS 1-3, 6, 9, 12-16, 21, 24, 25, 31-33, 76-78, 81, 84, 87-90, 95, 99 AND 105-107 UNDER 35 U.S.C. § 103(A)

Claims 1-3, 6, 9, 12-16, 21, 24, 25, 31-33, 76-78, 81, 84, 87-90, 95, 99 and 105-107 were rejected under 35 U.S.C. § 103(a), as being unpatentable over Verma in view of Rudoff. The rejection is respectfully traversed.

Amended Claims 1 and 10 are patentable over the applied references.

As discussed in the Background of the present application, synchronization operations often involve a significant amount of resource consumption. For example, when a synchronization application detects the addition of a new item to a copy of a file

system, the contents of the new file must be transferred to the file system being synchronized during the synchronization process. (Specification, Page 2).

This is inefficient if a new item in the copy of the file system is merely a copy of an existing item, especially if the item is large. The entire item is transferred from a copy of a file system to the file systems being synchronized during the synchronization process, even though a copy of the item is already in the file systems being synchronized. Similarly, when an item in a copy of a file system is edited, it appears to the synchronization process that the original item was deleted and a new item added. Consequently, the original items may be deleted in all synchronized systems, and the new altered item added to all synchronized systems during the synchronization process. (Specification, Page 2)

Note that independent claims 1 and 76 recite “recording information about one or more items in a file system to a comparison file” and “upon a synchronization event, comparing the location information for the one or more items in the comparison file to the working version to determine if any of the corresponding one or more working items has been moved to a new location in the working version.” Independent claims 12 and 87 recite “recording information about one or more items in a file system to a comparison file, wherein the information recorded to the comparison file includes location information to identify where in the file system the one or more items is located” and “upon a synchronization event, comparing information in the comparison file to the working version to determine if a first working item in the working version was copied from a second working item in the working version.” Independent claims 25 and 99 recite “recording information about a file system to a comparison file, the information identifying at least a first item in the file system located at a first location, the first

location being identifiable by a first location information” and “upon a synchronization event, comparing information in the comparison file to the working version to detect if at least one of two operations were performed on the working version, the operations including changing the first working location information for the first working item, and editing a content of the first working item. Independent claims 31 and 105 recite “recording information about a file system to a comparison file, the information identifying at least a first item in the file system located at a first location, the first location being identified by a first location information” and “upon a synchronization event, comparing information in the comparison file to the working version to determine if a compound operation was performed on the first working item, the compound operation including at least two successive operations from a set of operations that consist of changing the first working location information for the first working item, making a first working copy from the first working item, and editing a content of the first working item.”

Verma and *Rudoff*, individually or in any alleged combination of the two, do not teach or suggest the limitations of these claims.

INDEPENDENT CLAIM 1

Independent Claim 1 recites the following:

A computer-implemented method for managing files, the method comprising:
recording information about one or more items in a file system to a comparison
file, wherein the information recorded to the comparison file includes
location information to identify where in the file system the one or more
items are located;
generating a working version of a portion of the file system, the working version
including at least one or more working items that corresponds to the one
or more items located in the file system;
persistently maintaining the working version; and

upon a synchronization event, comparing the location information for the one or more items in the comparison file to the working version to determine if any of the corresponding one or more working items has been moved to a new location in the working version.

Such a method is not taught or suggest by Verma or Rudoff, either individually or in any reasonable combination thereof. Verma discusses techniques for creating a transactional file system, which allows application transactions to be committed to disk without compromising data integrity. (See Verma, Col. 2, lines 12-22). To do so, Verma defines a transaction coordinator that enlists and maintains a set of resource managers to control how and when specific commands are executed and how and when the results of those commands are committed to disk. (See Col. 8, lines 16-30). Although, multiple transactions may be associated with a single file, it is worth noting that Verma never records any information about a file to a comparison file. Nor does Verma use a comparison file to determine changes that have occurred in a file system. In other words, Verma does not teach “recording information about one or more items in a file system to a comparison file” nor does it teach “comparing the location information for the one or more items in the comparison file to the working version to determine if any of the corresponding one or more working items has been moved to a new location in the working version” as recited in Claim 1.

The Office Action cites Verma (Col. 9, lines 10-17) as teaching “recording information” and specifically references the “file handler” as the teaching in Verma that allegedly anticipates the “recording information” aspect of Claim 1. (See Office Action, Page 3). First, the Applicants respectfully note that Claim 1 recites “recording information about one or more items in a file system to a comparison file.” The cited section of *Verma* only teaches that a “file handle 90 returned in response to a successful

create/open request 80 will include a pointer to the transaction context 78.” In *Verma*, a file handler is a pointer to a “transaction context,” it is not a comparison file that contains recorded information in it.

Furthermore, the transactional context that the file handler in *Verma* points to does not teach a comparison file that records information about one or more items in a file system. The transactional context of *Verma* is an object. (See *Verma*, Col. 7, line 8; Col. 7, lines 31-32; Col. 7, line 53). The transaction context object contains information regarding a particular transaction being performed on a file system. Information about the file system itself is not recorded to the transactional context, nor to the file pointer that points to the transactional context.

Moreover, as presently amended Claim 1 recites “upon a synchronization event, comparing the location information for the one or more items in the comparison file to the working version to determine if any of the corresponding one or more working items has been moved to a new location in the working version.” *Verma* makes absolutely no mention of comparing information in a comparison file to a working version of a file system in order to determine whether changes in the working version need to be made in the original file system to maintain system synchronization. Therefore, the Office Action’s assertion that *Verma* anticipates those aspects of the claims is incorrect.

Furthermore, *Rudoff* lacks any teaching or suggestion that would indicate recording information to a comparison file and comparing information from the comparison file to a working version of a file system. Importantly, the Office Action makes no allegation that *Rudoff* does teach these elements. Therefore, even if a combination of *Verma* and *Rudoff* were obvious (although the Applicants dispute such a claim), together they fail to teach or suggest at least the first and last elements of Claim 1.

For at least these reasons, the Applicants respectfully submit that the 35 U.S.C. 103(a) rejection of Claim 1 should be withdrawn. Independent Claims 12, 25, 31, 76, 87, 99, and 105 all recite at least “recording information” and a “comparing information” from a comparison file. So for at least the same reasons as set forth above, the Applicants respectfully submit those claims are patentable over the applied references. Dependent claims 2-3, 6, 9, 13-16, 21, 24, 33, 77-78, 81, 84, 88, 90, 95, and 106-107 include the limitations of their independent claims 1, 12, 25, 31, 76, 87, 99, and 105 by virtue of their dependence. Therefore the dependent claims are patentable over the cited art for at least the reasons set forth herein.

REJECTION OF CLAIMS 4, 5, 7, 8, 10, 11, 17-20, 22, 23, 26-30, 79, 80, 82, 83, 85, 86, 91-94, 96-98, AND 100-104 UNDER 35 U.S.C. §103(A)

Claims 4, 5, 7, 8, 10, 11, 17-20, 22, 23, 26-30, 79, 80, 82, 83, 85, 86, 91-94, 96-98, and 100-104 were rejected under 35 U.S.C. §103(a) as being unpatentable over Verma in view of U.S. Pat. No. 6,101,508 to Wolff (“Wolff”). The rejection is respectfully traversed.

Claims 4, 5, 7, 8, 10, and 11 depend from Independent Claim 1. For at least the reasons discussed above, Claims 4, 5, 7, 8, 10, and 11 are patentable over Verma. Wolff describes a process for implementing volume load balancing in a clustered environment. Like Rudoff, the Wolff process does not teach or suggest recording information about one or more items in a file system to a comparison file nor does it describe comparing information from a comparison file to a working version of a file system. Therefore, even assuming en arguendo that a Verma-Wolff combination would have been obvious

(although the Applicants dispute such a claim), the alleged Verma-Wolff combination does not teach at least the first and last elements of Claim 1.

Similarly, an alleged Verma-Wolff combination does not teach or suggest the “reading” and “comparing” limitations in Independent Claims 12, 25, 31, 76, 87, 99, and 105. Dependent claims incorporate the limitations of their Independent claims. Hence, Claims 4, 5, 7, 8, 10, and 11 incorporate the limitations of Claim; Claims 17-20, 22, and 23 depend from Independent Claim 12; Claims 26-30 depend from Independent Claim 25; Claim 79, 80, 82, 83, 85, and 86 depend from Claim 76; Claims 91-94 and 96-98 depend from Independent Claim 87; and Claims 100-104 depend from Claim 99. The listed dependent claims are patentable over the cited art for at least the same reason as set forth above.

For the reasons set forth above, Applicant respectfully submits that all pending claims are patentable over the art of record, including the art cited but not applied. Accordingly, allowance of all claims is hereby respectfully solicited.

CONCLUSION

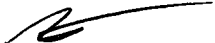
The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application.

A petition for extension of time, to the extent necessary to make this reply timely filed, is hereby made. If applicable, a law firm check for the petition for extension of time fee and all applicable extra claim fees is enclosed herewith. If any applicable fee is missing or insufficient, throughout the pendency of this application, the Commissioner is hereby authorized to any applicable fees and to credit any overpayments to our Deposit Account No. 50-1302.

Respectfully submitted,

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by


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